SOCIETY OF ILLINOIS PROFESSIONAL ENGINEERS — FOUNDED 1886

the ILLINOIS ENGINEER

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS — FOUNDED 1934

C. Herrick Hammond, Supervising Architect, Royer and Davis, Assoc. Architects

WATER RESOURCES BUILDING—CHAMPAIGN

(See page 2)

HE ILLINOIS ENGINEER, NOVEMBER, 1950—VOLUME XXVI, NO. 11

Address all communications to the Society at 204 Civil Engineering Hall, Urbana, Illinois.

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Affiliated with the National Society of Professional Engineers

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Of Professional Interest

IMPORTANT ITEM FROM THE LAST N. S. P. E. LEGISLATIVE BULLETIN

Note: Any authentic discussion on the question of deferment is important during these days of uncertainty. For that reason this item is given prominence in this issue of the ILLINOIS ENGINEER. *Editor*

BATTLE OF MANPOWER

The latest "battle" in Washington revolves about the mobilization activity. It is being referred to as the "Battle of Manpower."

For several months officials concerned with manpower have been at odds over the question of jurisdiction. The protagonists are: Major General Lewis B. Hershey, National Selective Service Director; W. Stuart Symington, Chairman of the National Security Resources Board; and Maurice Tobin, Secretary of Labor. Each of those agencies has some responsibility for manpower mobilization but their respective functions have not been clearly defined.

Of major interest in this situation to professional engineers is the question of deferments from service for professional and scientific personnel, and the status of students in engineering or science courses. General Hershey brought this particular question to a head when he appeared on a forum discussion on manpower and declared that the American people had been "sold a lot of baloney" about the necessity for deferring scientists and professional men from military service.

A storm of protest broke about the head of General Hershey following his statement. N. S. P. E. issued a statement declaring that General Hershey's remark indicated a failure to take cognizance of the critical results flowing from our experience in this field during World War II and citing authorities as to the necessity for a proper policy on scientific and technical personnel.

Other organizations also denounced the Hershey statement and Chairman Symington indicated the next day that he was not in sympathy with Hershey's attitude. After being blasted from all sides General Hershey acknowledged that some deferments may be necessary for technical persons.

The problem, as it affects engineers and scientists in key work, is really more academic than practical at the present time in view of the fact that the draft is applicable only up to the age limit of 26. It will become a major problem, however, if the draft age limit is extended any appreciable degree.

On the other hand, a major and pressing problem relates to the status of students in engineering and scientific fields. Within a few days after the Hershey statement a special conference of educators was held in Washington to consider the future of education in relation to the draft. At this conference a special committee appointed by General Hershey two years ago reported its recommendations for a long-range policy on student deferment. General Hershey has indicated basic agreement with the recommended policy but it has not been officially adopted as yet.

The major features of the policy are: there should be a deferment policy for students in colleges and universities, it should extend to all fields of study and not be limited to scientific categories, there should be a national aptitude test of all students with a required score equivalent to 120 on the Army General Classification Test, the student must be certified by educational authorities as giving promise of definite progress in higher education, there should be a cut-off point according to class standings and students below the appropriate percentile should be dropped from the deferred status. Under the

THE PRESIDENT'S MESSAGE

When you read this, it is expected that the agreement with Engineering Personnel Employment Service will be in effect. Its principal features and the several means by which members of our Society—both employee engineers and employers—may benefit are described elsewhere in this magazine. It is sincerely believed that it will provide for our members a service that potentially may repay them manifold for what it may cost. If an auspicious start is an augury, this service is assured of markedly successful operation for all of us. It represents the initiation of another activity through which our Society contributes substantially to the welfare of professional engineers and the engineering profession.

Also when you read this the Board of Direction will have approved plans and will have determined the program for the annual convention February 1, 2 and 3, 1951. It is earnestly hoped that a large proportion of the members of the Society will attend—only thus can the business transacted represent truly the wishes of the membership.

The cordial hospitality of Madison County and Lake County Chapters was enjoyed during October.

GEORGE E. EKBLAW, *President*

CONTENTS OF THIS ISSUE

READ THE ADVERTISEMENTS

SUBSCRIPTION RATES

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plan all freshmen would be eligible for deferment. After that the student would have to be above the 50th percentile for the sophomore year, above the 33rd percentile for the junior, and above the 25th percentile for the senior year. For graduate study the student would have to be above the 50th percentile of his previous undergraduate study.

Following completion of his education the individual would be retained in his deferred status for four months and after that would be eligible for the draft unless he had meanwhile obtained work placing him in a position essential to the national defense under present regulations.

The conference of educators endorsed the plan in principle but a number of them indicated serious reservations about the details. It was indicated at the meeting that there should be some requirement for national service after the student receives special deferment treatment. Others indicated some doubt about a failure to tie in the deferment with the needs of the nation. The plan is receiving close scrutiny by government officials, educators, and professional groups. Present indications are that some long-range deferment plan will be developed in order to continue a steady flow of trained professional personnel in face of the possibility that the mobilization period may extend for many years.

The heart of the problem was recently stated by Gordon Dean, Chairman of the Atomic Energy Commission, who said: "One consideration is to see that we 'keep the seed corn coming' for future growth and development by maintaining in full vigor, year-in-year-out, in wartime as well as in peacetime, the staff for scientific training in the universities. The corollary of this is that we also maintain the flow into the universities of the talented youngsters who can carry scientific and engineering training over to new accomplishments."

CHAMPAIGN COUNTY MEMBER MOVES TO BELLEVILLE

Mr. Carl C. Ambrosius who has been Division Engineer with the Illinois Power Company, Central Division, and a member of the Champaign County Chapter, has been transferred to Belleville where he will hold the same position in the Southern Division of his company. The chapter presented him with a letter-certificate in acknowledgment of his long years of valuable service to his local chapter.

INVITATION FROM THE ARCHITECTS

President Murphy has received a letter from the Architect Association of Illinois inviting Capital Chapter members to a state-wide meeting of architects in Springfield October 20th and 21st. The program includes talks on pre-stressed concrete construction and community planning by national authorities.

—Capital Chapter Chatter

COVER PICTURE

New State Water Resources Office and Laboratory, Champaign

This month's cover picture is an architect's renderi of the new State Water Resources Building in Cha paign. The following statements have been abstract from an article by Dr. A. M. Buswell, Chief, State Wat Survey, and published in the 1949-50 issue of the Il nois Blue Book:

"The new office and laboratory building is located the north campus of the University of Illinois in Cha paign. The plan dimensions of the building are 40 fe wide and 123 feet long. The building consists of thr floors, including the basement floor and a penthouse be used for head room for hydraulics experiments. T basement floor was constructed primarily as an expe mental hydraulic laboratory. The first floor provid rooms for business, conference, files and library, in ad tion to offices for the chief, secretary and head chemi Four chemical and hydraulic laboratories are also l cated on this floor. On the second floor, space has be provided for the engineering offices and research, ba teriology, nitrogen, minerals and service laboratories

The survey moved into this fine new building in la September.

Dr. Buswell has extended a cordial invitation to mer bers of the Society attending the Annual Meeting February, to visit this new provision for engineeri progress made by the State of Illinois.

VOX SECRETARII

P. E. ROBERTS, *Assistant Secretary*

Employment Service

The contract between the Engineering Societies Pe sonnel Service and the Illinois Professional Engineers the fulfillment of a long-felt need by the Society. In ar other column the full story is told.

Members of the Illinois Society who are interested i "looking around" will find it to their advantage to sub scribe to the E. S. P. S. Bulletin Service. Present sub scription rates are $3.50 for a three-month period. Th Bulletin is published weekly and contains positions avai able grouped as follows: Positions over $5,000; Eng neering Assistants; Junior Engineers, Engineering In struction; Engineering Sales; Late Additions; and Po sitions Closed. Sent with the Bulletin is a mimeographe listing of jobs available in the Chicago area.

If you are interested in subscribing to the Bulleti Service, address Mr. Joseph R. Decker, E. S. P. S., 8 East Randolph Street, Chicago 1, Illinois.

Membership

Applications received after November 115th will b processed and the new member elected during the mont of December. The check in payment of a year's due will be credited to all of 1951 dues. Membership com mittees in many chapters have been showing signs o increased activity. Nothing would please your Stat

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Official I. S. P. E. Nominees For 1951

VIRGIL E. GUNLOCK FOR PRESIDENT

Virgil E. Gunlock

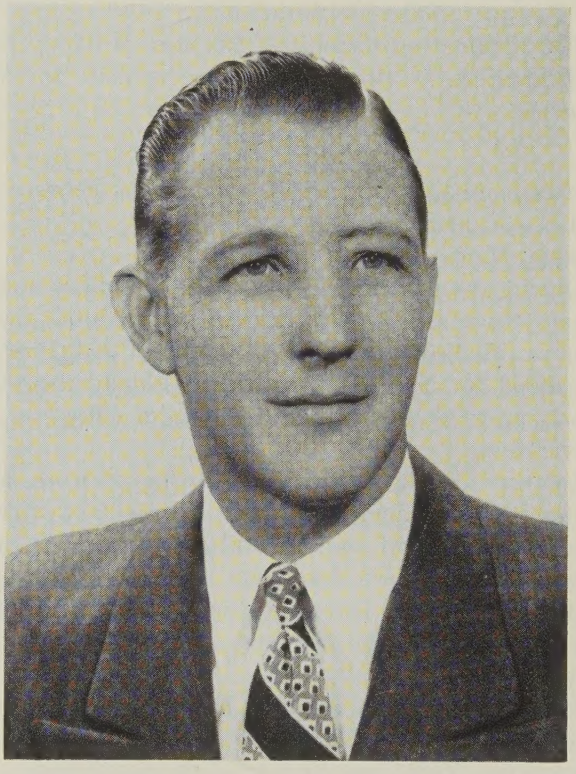
As Vice-President during 1950, Mr. V. E. Gunlock, official nominee for President, has demonstrated his interest in the Society and his ability to take over the duties of its highest office during 1951. The vice-presidency of the Illinois Society is no sinecure. That officer has the onerous task of checking and watching over the disbursement of Society funds. In carrying on these activities, he becomes thoroughly familiar with Society business and procedures so that he is in a logical position to take over the presidency during the following year. Mr. Gunlock has acquitted himself well as Controller during 1950.

Virgil Gunlock was graduated from the Department of Civil Engineering, University of Illinois, in 1927. Following graduation he was employed by the J. B. Klein Iron and Foundry Company of Oklahoma City as a structural designer. Later he was with the Sanitary District of Chicago, beginning as Junior Engineer and advancing to Assistant Civil Engineer in charge of heavy construction. In 1938 he was appointed Resident Engineer on the first subway contract in the Department of Subways and Superhighways. From that post, he was advanced to Chief Subway Construction Engineer, then to Chief Subway Engineer from where in June 1945 he was moved by Mayor Kelly to his present position as Commissioner of Subways and Superhighways. Most of the major projects of his department have moved forward during his time as Commissioner.

Many activities, corollary to his position as Commissioner of Subways and Superhighways, absorb his abilities. He was recently appointed Chairman of the Civilian Defense Traffic Planning Commission by Mayor Kennelly followed by an appointment by the City Council as Chairman of the Chicago Street Traffic Commission. He is, also, a member of the Chicago Plan Commission and the Engineering Board of Review.

Mr. Gunlock will be an outstanding President of the Illinois Society of Professional Engineers in 1951.

A. D. SPICER FOR VICE-PRESIDENT



A. D. Spicer

During recent years there has been no member who has shown more enthusiasm or worked harder in the Illinois Society of Professional Engineers than has A. D. (Doug) Spicer. Mr. Spicer became a member of the Society in 1944 and has taken an active part in its affairs since that time.

He began his membership in the Central Illinois Chapter in Decatur where he served as Chapter Representative for one year. After he moved to Kewanee at the end of the war he carried his interest in the Society with him and was primarily instrumental in the establishment of the Kewanee Chapter. He has served as its Secretary ever since and has been chairman of the society membership committee for the past three years.

Some words concerning his career in engineering are in order. After the completion of his engineering training at Bucknell and New York University he spent a year and a half roaming the seven seas as a member of

the "black gang" of a tramp freighter, coming back to engineering in 1936 with the Long Island Lighting Company. At the beginning of the war, he joined Ford, Bacon and Davis as an electrical engineer moving about from one military construction project to another. In 1943 he moved into a similar position with Robert and Company of Atlanta, Georgia, from where he was called by the Army in September 1943 to report for assignment with that portion of the Manhattan District Project (atomic bomb program) which was located at Decatur. He was in charge of all electrical engineering in connection with the design, construction and operation of that great plant. After V-J Day, he moved to Kewanee to accept his present position as electrical engineer with the Kewanee Boiler Corporation.

The Nominating Committee has made a happy choice in picking A. D. Spicer as a running mate for V. E. Gunlock.

VOX SECRETARII

(continued from page 2)

officers more than a flood of applications between now and the Annual Meeting.

Chapter Visits

During the past six weeks President Ekblaw and Assistant Secretary Roberts have visited Capital, Central Illinois, Madison, Lake with Egyptian and Peoriarea scheduled for November. President Ekblaw has visited nearly every chapter during his term of office.

Advertising

Interest has revived in the securing of more advertising for the **Illinois Engineer.** Several new accounts are at the point of signing contracts and much of the spade work has been done with other accounts. Cards in the Professional Directory from consulting engineering firms are good business and most welcome.

Miscellany

Professor and Mrs. Babbitt have been dodging hurricanes in Florida. They are in Alabama and will head toward the West Coast by way of the Southwest.

SIXTY-SIXTH ANNUAL MEETING

Urbana-Champaign, February 1, 2 and 3, 1951

The committees in charge of the detail of the 66 Annual Meeting have finished all of the prelimina work and are at the point of "getting down to case General Chairman Herb Hudson has been in close tou with the chairmen of his various committees by te phone, interspersed with round-table discussion.

The Banquet Entertainment Committee consists J. H. Morgan, chairman, A. R. Jones, P. E. Rober and M. O. Schmidt. It is the plan of this committee draw upon the wealth of talent found on the Univers of Illinois campus. The problem of the committee is select the acts which in their opinion will give the ma imum entertainment to the membership.

The Thursday Evening Smoker Committee is ma up of E. R. Healey, chairman, E. P. Shapland, R. Odman, W. Clark Root, C. W. Freeman, M. H. Kin W. H. Wisely, J. Y. Williams and J. T. Kearns. Ten tive arrangements have been made to hold the Smok in the Garden Room of the Urbana-Lincoln Hotel. T committee is going all out to not only give you a chan to relax but also meet and swap stories with your frien

The Ladies' Entertainment Committee is headed Mrs. William L. Everitt with a group of Champaig Urbana women as her helpers. They have kept th plans closely guarded but the ladies who attend will guaranteed a good time.

Ben F. Muirheid is chairman of Host and Housi Committee. Hotel rooms have been blocked off but ju in case there are not enough hotel rooms, there will a plentiful supply of rooms in private homes availab at reasonable prices.

From all indications, the 66th Annual Meeting of t Illinois Society will be a memorable one and one whi you will want to attend in person. Plan now to come Urbana-Champaign February 1, 2 and 3 and plan, to to bring your wife.

What It Means To Be A Professional Engineer

Professor W. M. Wilson

Professor W. M. Wilson needs no introduction to the Members of the Illinois Society of Professional Engineers. This address was given by him at a Chi Epsilon initiation banquet at the University of Illinois. While the paper was written primarily for a group of young engineers, the Editor believes that all engineers will benefit from the words of an engineer of Professor Wilson's eminence who has spent long years in the teaching and research branch of the profession.

Introduction: I was graduated from the Mechanical Engineering curriculum at Iowa State College in 1900. The educational requirements for both students and professors were somewhat lower than they are today. Nevertheless, I had fair teachers in English, good teachers in Mathematics and excellent teachers in Engineering Mechanics. As I look back now to the time of my graduation, it seems to me that my greatest deficiency as an embryo engineer was in the fact that I did not know what it was all about. I did not know what my work as an engineer would be. I did not know the characteristics which an engineer must display in order to succeed in his profession. It was for this reason that, when I was invited to address this meeting, I chose as my subject, What It Means to Be a Professional Engineer. Perhaps you have been more enlightened relative to the character of the work of an engineer than were those of us who graduated half a century ago. However, I will take the risk of imposing boredom by telling that which most of you may already know in the hope that, for some of you, the entrance into your professional life may be more intelligent and less a matter of chance than was my own.

Before proceeding it will be well for us to have a common understanding as to what is meant by the term, Professional Engineer. These two words, though in common everyday use, will bear definition.

The Charter of the Institution of Civil Engineering (London) date 1828, defines Civil Engineering as the "art of directing the great sources of power in nature for the use and convenience of man."

Those of you who fear that there are no new engineering fields to conquer, consider the breadth of this definition. Many years ago I was told by an internationally known professor of civil engineering that there is no more research work to be done in the field of civil engineering. Yet I say to you tonight, there has never been a time in the history of the profession when those of us who are engaged in engineering research were so conscious of the need for research as we are today.

As stated previously, engineering is the art of directing the great resources of power in nature for the use and convenience of man. It is not a converging field. Through research, it is continually expanding. Recent discoveries in pure science are finding applications in the field of applied science. And all of these mean further developments in civil engineering.

I have defined "engineering" at considerable length. Let us now consider briefly what is meant by "professional" as used in connection with engineering. Our encyclopedias and dictionaries are not too explicit in their definition of a profession. Webster gives as one definition, "A calling in which one professes to have acquired some special knowledge which is used by way either of instructing, guiding, or advising others, or serving them in some art, calling, vocation, or employment." Although the term is not thus limited in either the dictionary or the encyclopedia, by common usage it is considered to apply only to transactions on a high ethical plane. A professional man is not supposed to indulge in questionable practices such as those sometimes associated with horse trading and the selling of second-hand automobiles. A consulting engineer is expected to have the best interests of his client at heart. That not only includes integrity on his part but it also includes a knowledge of the laws of mechanics, the properties of engineering materials, a knowledge of the relative merits of the various types of construction, and a knowledge of the merits of the various processes by which the specific engineering ends are accomplished.

Having considered the definitions of Civil Engineering and of the term profession, it is fitting for us to ask what characteristics will contribute to your success in the profession of Civil Engineering.

I know of nothing that develops intellectual honesty to a higher degree than a study of the physical sciences. To the student of the physical sciences there should be no temptation to be dishonest, and for two reasons.

First, a love of knowledge is the activating impulse that causes a man to be a scientist. Without this love of knowledge, one would not be a scientist.

Second, a false report of a physical phenomenon is bound to be discovered. Consider the discovery that moving an electrical conductor across a magnetic field causes a current to flow in the conductor. Immediately after this discovery was announced, scientists in various parts of the world were verifying its truth. There is not even a temptation for a scientist to be dishonest in his work, for dishonesty is sure to be discovered. If love of truth does not keep him on the straight and narrow path, the certainty of discovery will. Bankers have been known to be dishonest in their financial transactions and, later, regain the confidence of their associates to the extent that they can again enter the business world. Women have lost their virtue and yet regained their standing in society. But I do not believe that a scientist who is known to have deliberately reported a phenomenon other than as it actually occurred, in order to sup-

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Society Offers Important New Employment Service To Its Members

(Prepared by P. E. Roberts)

For several years, the leaders of the Illinois Society of Professional Engineers have realized that an extensive and well-rounded employment service for its members would be desirable. In a recent survey, it was found that the cost to establish its own service would amount to several thousand dollars. Furthermore, the work involved to maintain the service at a high level would require additional office space and personnel.

Ways and means were canvassed in the attempt to find the most functional solution and one which the Society could afford. Combining with other groups who have similar problems was the obvious answer. Inquiries were made and it was found that it might be possible to join forces with an established nationwide engineering employment service. After preliminary discussions between the engineer's group and the Executive Committee of the Society, a contract was drawn which was satisfactory to both groups.

After due consideration, on October 6th, the Board of Direction gave its approval to the contract with Engineering Societies Personnel Service, Inc. and the Illinois Society of Professional Engineers is happy to announce that a full-time employment service is now available to its members.

The Engineering Societies Personnel Service was conceived and organized thirty years ago. It is operated in cooperation with the American Institute of Electrical Engineers, the American Society of Civil Engineers, the American Society of Mining and Metallurgical Engineers and the American Society of Mechanical Engineers, plus five affiliated societies. The combined circulation published by the entire group is over 110,000.

A new page makes its first appearance in this issue—a page listing positions open and men available. Both classifications are coded so that if either employer or a person seeking employment finds a classification of interest, further details can be quickly supplied. Chapter secretaries will be sent the weekly bulletin of E. S. P. S. and an individual member may subscribe to the bulletin service for a period of three months at a nominal price.

E. S. P. S. Service Features

1. The E. S. P. S. is the central clearing house for the supply of engineering personnel, with offices in New York, Chicago, Detroit and San Francisco.
2. E. S. P. S. co-operates with the leading national engineering societies.
3. E. S. P. S. has 30 years of experience in meeting the needs of private and public employers, in the U. S. and abroad, for every type of engineering work.
4. E. S. P. S. operates on a non-profit basis for the mutual benefit of the employer, the employee, and the engineering profession.
5. E. S. P. S. services are supplied without cost to employers. The employee pays the modest placement fee.
6. E. S. P. S. publishes Bulletins of Positions Available and notices of Men and Positions Available in the publications of each of its member societies including the *Illinois Engineer*.

E. S. P. S. a Central Clearing House

E. S. P. S. provides a central clearing house for Engineering employment. It registers engineers seeking employment and accepts employment opportunities. Experience of engineers and job specifications are classified according to a comprehensive method. Engineers registering are exposed to every position for which they are qualified and the availability and qualifications made known to prospective employers. Employers' specifications are exposed to engineers in appropriate classifications and experience of qualified engineers submitted for consideration. Prospective employer and candidate are invited to exchange information.

Advertising for employer and employee is made available in official publications of the participating societies for employers in a weekly national bulletin, and for the employees in a Chicago Bulletin. Listing of positions available are presented in each regional office for the use of employers.

These activities are provided at no charge to employee or employer. If the service results in the placement of an engineer in an acceptable position, billing is made to the engineer for a placement fee according to a scheduled table of fees sufficient to defray the expense of this non-profit self-supporting service. Primary consideration is given to members of the societies in making referrals and the fee schedule provides for a reduced placement fee for members placed. Placement fees for non-members is 33⅓% greater than for members. The cost to the individual society member is approximately 3% of the annual salary received upon acceptance of position.

The services of this engineering employment service, exceeding all others in the country, has resulted in the placement of 55,000 engineers in acceptable positions.

Qualifications for Affiliation with E. S. P. S.

Before an engineering society or an engineering association can become eligible for affiliate membership with E. S. P. S., that society must meet several requirements as follows:

1. Qualification as an engineering group on a professional level with control of the membership vested in the society at a level in accordance with the admission requirements of the founder societies.

2. Recommendation of the C. A. C. - E. S. P. S. and approval of the New York Board of Directors of E. S. P. S.

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Engineering Societies Personnel Service, Inc.

New York Chicago Detroit San Francisco

84 East Randolph Street, Chicago 1, Ill. STate 2-2748

These items are from information furnished by the Engineering Societies Personnel Service, Inc., Chicago. This SERVICE is operated on a co-operative non-profit basis by the Illinois Society of Professional Engineers, and the national societies of Civil, Electrical, Mechanical and Mining and Metallurgical Engineers. Apply to ESPS, Chicago and the key number indicated. Prepared ENGINEERS AVAILABLE advertisements limited to 40 words, with typed resumé attached may be submitted to ESPS Chicago by members of the Illinois Society of Professional Engineers at no charge.

If placed in a position as a result of an Engineers Available or Position Available advertisement, applicants agree to pay the established placement fee. These rates are available on request and are sufficient to maintain an effective non-profit personnel service. A weekly bulletin of positions open is available to subscribers. Apply E. S. P. S., Chicago.

POSITIONS AVAILABLE

Design-Development engr. (electronics) E.E. under 30. Min. one year electronics design small aircraft equipment, amplifiers, thyratron rectifiers used on electric controls for converters, dynamotors, generators, etc. Manufacturer. $60 up. Chicago. R-6959

Draftsmen (2) Mechanical detailing light weight, close tolerance precision mechanisms. Manufacturer. $300-$325. Chicago. R-6960(b)

Chemical Engineer research dept. lab. and paper mill technical department. Will consider recent graduates and/or exp. engineer. Graduate — better than average scholastic grades. Manufacturer of paper and cellulose. Submit records. $265 — recent grad; $400 for exp. engr. Location: Wisc. R-6961

Chemist (grad.) 1 year upward adhesive resin emulsions; knowl. formulation, test and production control; informed about cold or cooked mixes, tan king and agitators. Will set up production line. Manufacturer resin adhesive emulsions. Salary: Open. Location: Chicago. R-6962

Structural Engineer, 25-30; 3 years detailing structural shop work; knowledge field work helpful. Detail structural work diversified nature. Consultant. $2.00-$2.50/hr. N. W. Chicago suburb. R-6963

Office Sales Engr. M.E. 22-30. Recent grad. with demonstrated aptitude for sales or about two years office engrg. Knowl. thermodynamics and heat transfer. Informed about power plant refinery or gas transmission equipment. Office sales, rating, estimating, technical correspondence and pricing for industrial power plant, gas transmissions and refinery equipment. Erection and manufacturing company. $300. Chicago. R-6964

Recent Graduate (E.E. Electronics) Age: 22-30. Preferably television. Knowledge of components and tubes. Duties: development work color tubes for television. Manufacturer of tubes. $275. Chicago. R-6965(a)

Junior Draftsman: Age: 22-30. Up to two years exp. either mechanical or electrical drafting. Knowledge electronic tubes helpful. Duties: drafting work television tubes and other parts. Manufacturer of tubes. Salary: Open. Chicago. R-6965(b)

Cost Accounting and Process Engr. several years exp. required cost and/or accounting background preferably petroleum products. Practical exp. in economical processing of petroleum derivatives. Informed about cost and/or accounting methods. Manufacturer of petroleum hydro-carbon products. Salary $350+. Chicago. R-6966

Designers, Struct. Mech. Elect. and Chem. 5 years industrial and power plant design layout. Able to work with limited supervision. Engineering and construction company in New York. Salary $485—37½ hr. week. New York. R-6967(b)

Designers, Senior Elect. Struct. Mech. and Chem. Age: up to 50. Top flight designers industrial buildings and power plants. Chemical plant layout. Construction and engineering company in New York. Salary to $8000. New York.

Rodman and Chainman, civil engineering background. Able to work in survey party establishing levels and collecting data for street work. $200. Chicago.

Structural Steel Detailer, C.E. with Illinois license. Three years + exp. req'd. structural steel fabricating shop detailing. Chief Engineer for a small structural steel fabricator. Will make own detailed shop drawings. For a manufacturer of structural steel products. Salary: Open. Location: Chicago. R-6994

ENGINEERS AVAILABLE

Sales-Service Chgr. Chem. Eng. 36. Three years administration, sales, and installation locomotive equipment. Eight yrs. fuel and water eng. railroad; one year city sewer inspector; and seven mos. railroad water inspector. Midwest. $6000. 746PE

Industrial Engr. 43. Two yrs. wage incentives; spot welding standard data; and sheet metal operations data. Two years costs, methods, plant layout, work simplification and pricing printed tape products. Five yrs. general industrial engineering cosmetics. Two years time study mail order and two years estimating and time study camera manufacture and machine shop. Chicago. $5200. 747PE

Purchasing or Designing Engr. 29. Four and a half yrs. purchasing materials, machinery and tools and supervised steel fabricating production. Three yrs. Chief Draftsman detailing steel fabricating operations. Chicago. $5000. 748PE

Plant Eng. or Const. Supt. C.E. 42. Six and a half yrs. plant layout and structural eng. plant projects food processing plant. Two yrs. construction eng. steel plant; three yrs. field eng. refineries and water filtration; and two yrs. plant eng. cement plant. Chicago. $6000. 749PE

Sales Engr. E.E. 25. Eight mos. sales department Diesel engines — specifications, bids, estimates and contracts. One year testing electrical rotary equipment. Midwest. $3600. 750PE

Industrial Engr. 45. Two yrs. sales domestic refrigerators; one yr. personnel—indus. eng. bed spring manufacture. Balance of working life industrial engr. covering all phases from time study to budgetary controls metal machine and machine industries. Chicago. $4800. 751PE

Technical Writer, 29. Two years writing service and technical manuals, water treating and filtering equipment. Three years writing manuals and specifications agricultural implements. One year ordnance inspection. Chicago. $4500. 739PE

Chief Engineer, 42. Three years chief mechanical engineer power plant consulting firm. Three years Utilities Superintendent cartridge company. One and a half years power superintendent food plant. Nine years assistant plant engineer—paper mill. Midwest. $9500. 740PE

Chemical Engineer. Chem. Eng. 39. Three and a half years accounting and auditing. Desire position involving both research and production. $250. Anywhere U. S. or foreign. 741PE

Electrical Designing Engineer, E.E. 45. Eight years lay-out and design wiring, power, light, heating controls, writing specifications; piping; and refrigeration systems. Seven and a half years construction and maintenance work on commercial and industrial buildings. Chicago. $7800. 742PE

Sales Engineer or Factory Manager. 34. Three year selling technical intangibles and directing a trade school. One year Chief Design Engineer; and eight and a half years supervising production pumps and flow meters. Chicago. $5600. 743PE

Maintenance or Plant Engr. 35. Nine years plant engineering and maintenance building materials, steel tube, spring and axle, and aircraft plants. Five years charge machine shop. Chicago. $8600. 744PE

Sales or Plant Engr. M.E. 34. Four years sales steel strapping for industrials. Four years Plant Engineer steel fabricating. Chicago. $5400. 745PE

Consulting or Designing Engr. M.E. 27. Four years preparing preliminary data, detailing specifications, field investigations and designing mechanical portions steam-electric power plants. Three months project work aircraft engine test cell. Midwest. $5000. 738PE

SOCIETY OFFERS NEW SERVICE

(continued from page 6)

3. Regular payment of a nominal or token service charge.

4. Agreement to provide at no charge, customary advertising or promotional support through such media as used by the society to contact the general membership.

5. Provide appropriate representation on the E. S. P. S. Advisory Committee and establishment of such representation at an appropriate level in the society organization so as to provide for channeling of employment information to the general membership, to the several operating committees and to those officials charged with the conduct of the society's affairs.

6. Entrance into contractual agreement with the E. S. P. S., Inc., which would provide for the rendering of a complete employment service by E. S. P. S. through its several offices and complete facilities to all members of the contracting group. Provision that these members, officially listed, would be entitled to the preferential treatment and reduced placement fees for employment service as is regularly accorded members of the four founder societies and other affiliated groups. Provision of regular reports as are now provided all participating societies.

7. Acceptance of the non-profit status of E. S. P. S., Inc., and agreement to provide a proportional share of such sums as may be required to maintain continuou service should total expenditures exceed total receip beyond the limit of E. S. P. S. reserves.

8. Provision that contractual terms may be amende or terminated by mutual consent with acceptable notic

The E. S. P. S. operates four full-time offices fro coast to coast. The Chicago office is at 84 East Randolp Street, under the direction of Mr. Joseph R. Decke Other offices are located in New York, Detroit and Sa Francisco. Offices in co-operation with others are locate in Boston and Philadelphia and plans for further offic at other strategic locations are under way. The effectiv ness of these offices is attested to by the fact that in i thirty years of service, over 50,000 engineers, executive salesmen, writers and educators have been placed.

Affiliation with Engineering Societies Personnel Ser ice, Inc., is a real step forward for the Illinois Society Professional Engineers and makes available to its men bers a top-flight engineering employment service at fe of considerably less than that charged by private age cies. A further advantage is that E. S. P. S. specializ in engineering employment. Additional informatic about the Service will appear each month in the pag of the *Illinois Engineer* and through data sent direct to chapters. If you have specific questions, please a dress them to the Secretary's Office.

WHAT IT MEANS TO BE A PROFESSIONAL ENGINEER

(continued from page 5)

port an erroneous conclusion, could ever regain the confidence of his colleagues.

Intellectual honesty is an absolutely essential element in a scientist, and science is the foundation of engineering. If your engineering studies have not developed in you intellectual honesty, they have not prepared you to be an engineer.

Do Creative Work: One of the most important functions of the engineer is to do creative work. It is not only the most important function but it is also the sources of the greatest satisfaction. By creative work on the part of an engineer, I mean converting a situation as we find it into a situation that will serve humanity. It may be on a small scale or it may be on a large scale. It may consist of felling a tree across a brook so that it will serve as a bridge; or it may be the design and construction of a mammoth steel bridge to carry a railroad across the Mississippi River. Both of these enterprises are creative. They both require a creative instinct. They differ primarily in magniture and complexity. They both require the vision to recognize the need and, having recognized the need, it is necessary to devise a scheme whereby the need can be met. The latter requires a creative instinct which, as previously stated, is one of the most important characteristics of an engineer.

I remember listening with rapt attention to Mr. Mottier, Chief Engineer and Vice-President of the Illinois Central Railroad, describe the development of a centr railway terminal for one of our large southern citie He told of the many things that had to be considere the final aim, of course, being to provide a common te minal to be used by all of the railroads entering the cit This embodied the abandonment of several old terminal the location of new tracks which, in turn, embodied th condemnation of property, the relocation of streets, an the construction of new bridges and warehouse. It wa necessary to obtain new rights-of-way, make an equ table distribution of the cost among those participatin in the enterprise, locate temporary tracks to be used du ing construction, etc., etc. All of this embodies creativ enterprise in its upper brackets. It is the kind of wor which will cause a man who is a real engineer at hea to forsake all other enterprises in order to follow th profession of his choice.

Enterprises of this magnitude are current at all time in all branches of engineering. But, you say, such ente prises are for the few. Not all of those present will eve function on such a scale. And those who do, will no direct a project of this magnitude for many years t come. However, the realization that there are such pro ects and that in two or three decades such projects wi be under the direction of men now graduating, shoul be of interest to all of those present who expect to pra tice engineering, and for the following reason: The el ments of creation which are so necessary to the desig of a large terminal, or any other major engineering pro ect, are present to a considerable extent, but on a smalle

cale, in the smaller enterprises to which you may hope o be assigned in the near future.

The design of a large railroad terminal is the work f an engineer who has attained large professional status. or the purpose of illustration let us consider a prob- em on the level of the activities of an apprentice engi- eer, a recent graduate such as you will be shortly. If n apprentice engineer is working for a company that pecializes on the design of steel mills, he will not be equired as his first job to design a huge steel plant that overs several acres. Instead, he may be called upon to devise some minor detail in one of the buildings that houses the mill. But the creative processes of design will be similar; the difference will be primarily in the mag- nitude of the job.

Forty years ago I worked as a structural draftsman for a company that designed and detailed the structural steel buildings for the Gary plant of the U. S. Steel Cor- poration. There were enormous blast furnaces and roll- ing mills. There were several buildings each of which covered acres and acres of ground. There were water mains, air ducts, and steam pipes that serviced the vari- ous installations. There were stairways to enable the workmen to get to the installations in various parts of the buildings. The major parts of the installation were designed by engineers with years of experience. A typi- cal assignment for a cub engineer, of which I was one, was to design and detail the supports for a water main to service a given installation. Relative to the design of the mill as a whole, that is a small problem. But it con- tains the elements requiring creative ability common to most problems, large or small, namely: Certain ends were to be attained. Certain existing conditions con- trolled. The engineer had to go from the latter to the former. The first step in doing this was to isolate and recognize both sets of conditions. These include:

1. The source point and pressure of the water supply.
2. The points at which water was to be delivered and the quantity required.
3. The major parts of the plant and buildings to be avoided.
4. The location and details of the structural members of the building available for supporting the pipe line.

Put up in this form, the problem requires some thought but is simple and can be easily solved. The dif- ficulty of the problem, if any, is in breaking it down into its simple elements. All problems are easy when broken down into their simpler elements. They differ primarily in the difficulty involved in breaking them down. The important thing is a conception of the pro- cedure. That once recognized, the development from master of the simple to master of the complex is a mat- ter of practice and experience. Practice in analyzing simple situations develops the ability to analyze complex situations. The wise cub engineer will utilize to the full- est every opportunity to do creative work.

A cub engineer is judged by his ability to go beyond his instructions. Note carefully, I say go beyond, not contrary to, his instructions. It is a happy experience for a supervisor when he discovers that he has an assist- ant that can intelligently go beyond his instructions. A supervisor gladly relinquishes direction in detail as soon as he finds that he has an assistant who will use his ini- tiative in supervising himself. And supervising oneself is the first step in training oneself to supervise others.

I put as the No. 1 item necessary to the development of a cub engineer into a professional engineer, the fol- lowing: Take advantage of every opportunity to do cre- ative work.

Nor is the importance of doing creative work limited to being a means of development. It can also be an end in itself. For there is nothing more fascinating to one who has ever experienced the satisfaction of doing cre- ative work than to do more creative work, to the end that the making of a livelihood, instead of being drudgery, becomes a fascinating enterprise in its own right. This is one point in my philosophy of life: Every man, espe- cially every educated man, should be able to make a liv- ing doing the things that he enjoys doing. And to me there is no greater source of pleasure and satisfaction than doing creative work. I do it as a means of making a livelihood, but in doing it as a livelihood I am also doing it as a hobby. Happy is the man who can use a hobby as a means of livelihood. And that is possible for an engineer who has learned to love creative work.

Have Courage: I have discussed at some length the importance of creative thinking. This implies that a de- sign or a detail may be original, may be one for which there may be no precedent. In fact, it may be contrary to established practice. It is an old saying that "the proof of the pudding is in the eating." To retain the illustrative figure, if a design or detail is the result of original thinking, no one has ever tasted the "pud- ding." Yet you propose that someone will invest in the results of your thinking. This makes it necessary for you to have confidence in your work. Your reasoning must be sound and your analyses and computations must be accurate.

When one specifies that a certain design shall be fol- lowed he is assuming full responsibility for its suffi- ciency. If you say to do thus and so and the design is inadequate, you are responsible. This assumption of re- sponsibility requires courage, a courage that can only be sustained through confidence in your thinking and accuracy in your computations.

Nevertheless, you must be courageous. And if you cannot be courageous, you are out of place in engineer- ing. Perhaps you are better fitted to fill automobile gas tanks in a service station.

Recognize the Significance of Facts: Engineering is based on the physical sciences. The laws of the physical sciences have been developed by observation of controlled phenomena. Besides these observations on which the

physical sciences are based, there have been many instances in which an engineer has based important decisions on isolated observed facts. In view of this I would say that another necessary attribute of an engineer is the ability to recognize the significance of facts.

We are all familiar with the story of Newton and the apple. Millions of men between the time of Adam and the time of Newton had seen apples fall off trees, but it was left to Newton to realize that the apple fell because it was attracted by the earth. And, having realized the attraction between the earth and the apple, he reasoned that a similar attraction exists between all bodies.

I remember an incident that occurred in the office of the company that designed the Gary mills referred to previously. There was an informal argument among the men in the drafting room. When asked what it was all about they said they had to connect two steel shells end to end. One was in the form of a frustrum of a cone and the other in the form of a cylindrical shell. Moreover, the axes were to intersect at an oblique angle. The men were arguing as to how to lay out the joint so the two parts would fit. When one of their number remarked that sections of a cone and sections of a cylinder are both ellipses and that two ellipses having equal major and equal minor axes are identical, they looked somewhat sheepish but realized that they had found the basis of a solution of the problem. But before they found it they had to be reminded of the significance of a few well known facts.

There is one non-resident lecturer in engineering who has spoken to our students many times, although he has not been with us recently. This is a loss on our part. I refer to Dr. Herman von Schrenk. He is an engineer botanist who has specialized in the properties and uses of wood in engineering structures. Some forty-odd years ago I taught Materials of Construction at the Iowa State College at Ames. I remember that I supplemented the contents of Johnson's Materials of Construction with von Schrenk's reports on wood preservation. It was my introduction to systematic work. It was not until nearly forty years later that I was to have the pleasure of his acquaintanceship.

As I have said, we used to have him speak frequently to our students. On every occasion, he used to tell one story that we never tired of having him repeat. It was somewhat as follows:

As a cub engineer botanist he had been invited to accompany a group of big-shot engineers of a railroad on a trip to the southwest where they inspected a proposed new location. It was a region of enormous ridges and gulches, and the railroad would have to weave back and forth, up one side of a gulch and down the other, to gain elevation so that it could get over a pass. The lower the elevation of the railroad on the side of a gulch the shorter the distance it was necessary to go up each gulley and the cheaper the construction. But there was no record of the flood level for the various gulches available. They knew that the lower the road-bed the le the railroad would cost. But they also knew that if was below the flood level of the gulches it would be like to be washed out. Knowledge of the location of the flo level in these gullies was worth literally thousands a thousands of dollars.

Early on the trip Dr. von Schrenk, not being inte ested in the discussion of the engineers and, in order satisfy his curiosity as a botanist relative to the chara teristics of the yucca plant so common in the vicinit he remained behind. When the other members of t party returned, he was down on his hands and knees di ging around the roots of a yucca plant with his pock knife. Concentrating his mind on his work, he did n notice the approach of the other men until the lead of the party asked him why he was playing in the dir Dr. von Schrenk said that he was examining the ro system of the yucca plant. The party leader sarcast cally replied that he did not see any connection betwe the roots of the yucca plant and the location of a rai road.

When the group returned to Chicago they had a co ference relative to the location of the railroad. The e gineers not being able to come to any conclusion, t chairman, noting that Dr. von Schrenk had not take any part in the discussion, more in sarcasm than hop asked him if he could advise them as to the best locatio of the railroad. To this, Dr. von Schrenk said that h could. This surprised the leader who asked him if h would mind telling the remainder of the group where h would locate it, and why. Von Schrenk, demanding h pound of flesh, said, "Do you remember what you sai when you found me digging with my knife around th roots of the yuccas?" The leader knew that he wa hooked and, holding up his hands, said, "Tell me wha you want me to do and I will do it, but first tell u where to locate the railroad." Then Dr. von Schren said, "You saw that the tops of the yucca plants ar very large. I, digging with my knife, found that the roo system is very small. Consequently, the yucca cannc withstand a flood. You noticed that there is a thic stand of yucca on the knolls but there are none low dow on the sides of the gulches. The lower border line of th areas on which the yucca plant grows is the highwate mark for the floods, and a railroad located just abov this line will not be washed out."

All of the engineers in the party had seen the well defined edge of the area in which the yucca grows bu only the botanist recognized its engineering significanc

One of the prerequisites for success on the part of a engineer is the ability to realize the significance of facts

The Ability to Recognize Situations That Have Possi bilities: As we follow the career of the engineering grad uate, we find that the scope of his work broadens. More over, the character of his work may change. Instead o carrying out the projects conceived by others he ma be the one that conceives the project. In that case, hi

he attribute of greatest importance will be his ability to recognize situations that have possibilities.

What do I mean by a situation that has possibilities? We are now living in the month of April. May will soon pass and then you can say with the poet, "What is so rare as a day in June?" Some bright June evening you may be strolling by the side of a beautiful lake. The moon is shining bright. There is a boat available, a beautiful girl unattended. Well, to make a long story short, and without any suggestion on my part, you recognize a situation that has possibilities.

Great enterprises have resulted, generally, from the fact that someone has recognized a situation that has possibilities. Not all situations that have possibilities have been recognized. Or, if recognized, they have not all been developed. In recognizing situations that have possibilities, and in developing situations that have been so recognized, the engineer functions at his highest level.

Early in the present century, the low cost of water transportation from the great iron-ore deposits on the northern shores of the Great Lakes to their southern shore where there was cheap land adjacent to a large industrial area and its connecting railroads, caused the site where the steel city of Gary now is to be recognized as an area which had possibilities. Having been recognized as such, the steel mills were built. Similar situations, although most of them on a smaller scale, exist all over the United States today. One by one they are being recognized and developed. Many, however, are yet to be recognized. They constitute opportunities for engineers of the future.

After you have served your apprenticeship, after you have arrived, in the sense that you have acquired a reputation and occupy a position of trust and responsibility, I predict that there will still remain unrecognized, many situations that have possibilities. And you will not have arrived too late to take your part in recognizing them, providing only that on the way up you utilized your opportunity to develop the necessary capacity to take advantage of such a situation.

I like to think of the analogy between the development of a top engineer and a big league ball player. No big league ball player was ever "discovered" in the big league. He begins in the sand-lot league. The best of those in the sand-lot league make the high school teams. The best of the high school players make the college teams. The best of the college players make the minors and the best of the minors make the majors. No player in a major league has his first experience playing baseball as a member of a major league. By a process of natural selection, the best at each level was given an opportunity to try out for the level above. And it is only by being among the best at each level that one is given a chance to try out for the level above.

The engineers who attain the top level are automatically selected in the same way. Those at a given level who develop into the best in that level are selected for promotion to the level above. This process goes on through the successful engineer's whole professional life, and each individual is screened out when he has reached the maximum of his possibilities.

Continuing the analogy between the engineer and the ball player, where the latter has to develop the ability to field, throw, bat and run, the engineer must have scientific knowledge, intellectual honesty, and be able to do creative work at all levels. In addition, he must have courage and industry. He must realize the significance of facts and recognize situations that have possibilities. In addition he must work hard and intelligently and develop a frame of mind that will enable him to enjoy his work as he would enjoy a hobby.

News From Chapters

Joliet Chapter

The regular October meeting of the Joliet Engineers' Club was held Tuesday, October 17, 1950, at "Little Jack's" with 22 members and 7 guests present.

Following dinner, the meeting was called to order at 8:10 p. m. by President Seiberling who urged all present to attend the "Fire Power Show" to be presented October 30, 1950, at the American Legion Ballroom.

President Seiberling then turned the meeting over to Vice-President Gray.

The minutes of the September meeting were read and approved.

Under the head of new business, C. E. Rogers and J. M. Whelan explained the purpose of the new program, sponsored by Capital Chapter, for the raising of funds for employing a Legislative Analyst to follow the proceedings of the State legislature and promote the welfare of engineers.

H. J. Eggens moved to invite Mr. H. A. Spafford of Capital Chapter to the November meeting to speak on the subject of Legislative Analyst. Motion seconded by M. S. Brown. Following a discussion during which it was suggested that Mr. Spafford be informed that there was considerable sentiment against the employment of a Legislative Analyst, and for him to accept or decline the invitation as he wished, motion carried by a vote of 11 for, and 9 against.

It was duly moved by William Chaney to form a committee to study what could be accomplished toward starting a civil defense program. Motion seconded by M. S. Brown. Motion carried. President Seiberling appointed the following as members of this committee: William Gray, A. M. Schott, M. S. Brown, A. C. Hoyt, J. Whe-

lan, F. M. Hopper and H. R. Goodspeed.

Following the business meeting a very interesting program, entitled "How the Drama of Portland Cement Can Work for You," was presented.

Meeting adjourned at 10:05 p. m.

F. H. TITTSWORTH, *Secretary*

Central Illinois Chapter

Central Illinois Chapter of the Illinois Society of Professional Engineers opened their 1950-51 season on Thursday evening, Sept. 28th, with quite an impressive group of high ranking officers in attendance. These included Mr. George E. Ekblaw, State Society President; Mr. W. A. Oliver, National Director and Editor of the *Illinois Engineer;* Mr. P. E. Roberts, Field Secretary; Mr. Alex Van Praag, Past National President; Mr. J. M. Whelan, Past State President; and Mr. Earl E. Cooper, Past State President.

Our State President, Mr. George E. Ekblaw, was the speaker of the evening and gave us an excellent discussion on State Society activities and problems. He covered many of the duties of the 23 state committees, paying particular attention to the new Military Affairs Committee and the Civic Affairs Committee. The new employment service for our State Society membership which will soon appear in the *Illinois Engineer* was also brought to our attention.

Mr. P. E. Roberts asked that we begin to make plans for attending the next State Convention to be held in Champaign-Urbana on next February 1st, 2nd, and 3rd.

John Sweetnam stated that he had received three replies from parties who were interested in providing engineering service on recreational lakes and dams and that this information had been forwarded to the State Society office.

Harry A. Meinert, chairman of the Civic Affairs Committee, introduced Dr. W. D. Hatfield who explained the proposed extension to sewer system for the outlying districts of Decatur, and asked that we give favorable consideration to this matter. Motion was made by R. W. Carter that we go on record as approving the proposed sewer project, and that notice of our action be sent to the local newspaper. Motion was seconded and carried.

W. M. Royer called attention to the matter of the proposed state highway coming in through the north side of Fairview Park and made a motion that the Civic Affairs Committee make a study of this and report at the October meeting. Motion seconded and carried.

The meeting was held in the Tunnel Room of the St. Nicholas Hotel with 33 members and guests in attendance.

F. E. TROXEL, *Secy.-Treas.*

Lake County Chapter

A special business meeting of the Lake County Chapter of the Illinois Society of Professional Engineers was held Wednesday, October 4, in the council chambers of the Waukegan City Hall. Twenty-five members we present.

The meeting was called to order by President Simo sen at 8:08 p. m. The minutes of the meetings of Ju 21 and September 20 were read and approved. The trea urer's report was read and approved. Chairman Stab reported that the Membership Committee was functio ing but that results had not been particularly encoura ing. Chairman Drew reported that the program for t regular October meeting would be supplied by Anacon Copper and would cover the mining and fabricating copper products. Chairman Miller reported that the had been no activity of the Registration Law Committe President Simonsen announced that the Refresh Course sponsored by the local chapter was being he and Mr. Puzin gave some of the statistics on this cours Chairman Bleck stated that the Legislative Analy Committee had no report to make.

President Simonsen then introduced Mr. H. A. Spa ford, chairman of the State Legislative Analyst Commi tee. Mr. Spafford then discussed the various state co mittees dealing with legislative matters and the diffe ence in the functions of these committees. Mr. Spaffo outlined what results were expected from the propose Legislative Analyst. There was a discussion with vario members as to the problems raised by the proposal to a this Analyst to the staff. The discussion was primari as to the problem of raising the necessary funds to s cure the services of this Analyst and the advisability making an all-out effort to finance this matter. No sui able decision was made and no motions were presente to the meeting.

President Simonsen read the resignation of Secretar M. T. Anderson to become effective immediately and a pointed member E. A. Jaeschke to fill the remainder the present term of office. The meeting adjourned a 10:15 p. m. with a rising vote of thanks of the membe ship to Mr. Anderson for his efforts as chapter secretar

M. T. ANDERSON, *Secretary*

Regular Meeting, Wednesday, October 18

The regular monthly meeting of the Lake Count Chapter of the Illinois Society of Professional Engineer was held Wednesday, October 18, at the Chateau du Jou Restaurant. Dinner was served to 43 members an guests. The business meeting was called to order at 8:0 p. m. by President Simonsen. Minutes of the speci business meeting of October 4 were read and approve with the correction that Mr. H. A. Spafford was intr duced by H. B. Bleck, not by President Simonsen.

President Simonsen introduced Dr. George E. El blaw, State President of the I. S. P. E., who spoke info mally of various state activities which are briefly high lighted:

(a) Based on the last Annual State Meeting held a Decatur it appears that at least one day is r quired to conduct the business affairs of th I. S. P. E.

(b) The week of Washington's Birthday has been designated as "Engineers Week."

(c) There are 23 State committees. With respect to those dealing with Civil Defense and Public Interest the thought was expressed that engineers as individuals should express themselves publicly and use their influence in civic affairs. As to associations with elected public officials, engineers should endeavor to be of service and it was the expressed hope that public officials become aware of this relationship.

(d) The U. S. G. S. mapping service as applied to the State of Illinois is in fair shape with metropolitan areas requiring the greatest work.

(e) The Engineering Societies Personnel Service, Inc. has made a contract with the I. S. P. E. whereby members can obtain employment service below that of regular employment agencies.

(f) The I. S. P. E. is becoming an authoritative source of advice and is ready to certify competent members when so requested. In this connection, the Schedule of Fees and Salaries is beginning to receive general recognition.

President Simonsen inquired as to what colleges are doing to promote the professional aspects of engineering. After some discussion the general conclusion was that student branches do not appear to be the answer and that more can be gained if students were to attend the regular chapter meetings in their area.

It was stated by M. E. Amstutz that advertising in the *Illinois Engineer* is not too attractive to industry since national coverage is usually desired and that advertising agencies are able to give this service. Dr. Ekblaw answered that the N. S. P. E. has the same problem. C. L. Calkins mentioned that while it is true that advertising agencies work on a circulation basis, when engineers can be reached directly, the advertising is pinpoint and is multiplied by the business contacts of the engineer.

Mr. "Skeet" Roberts, Assistant State Secretary, was introduced by President Simonsen. Mr. Roberts announced that the fifth group of Refresher Courses are now in session and that it is planned to begin the sixth group shortly after the first of the year. There are now about 1,850 members in the state and, as stated by Mr. Roberts, if each chapter would add about ten members this year the goal of 2,000 in 1951 could be attained. Mr. Roberts mentioned that new members accepted after July 1 will have their dues carry to July of the next year. Those accepted after December 1 would have their dues cover the full year following.

Dr. Ekblaw suggested that it would be desirable if each chapter were to have at least one member who could act as Counsellor for young engineers in their area.

Mr. Drew introduced Mr. E. H. Bastedo, sales manager of the Anaconda Wire and Cable Co., who presented the movie, "Nerves of the Nation," which was an excellent portrayal of copper mining and refining as conducted in his company's operations in the state of Montana.

The meeting was adjourned at 10:10 p. m.

E. A. Jaeschke, *Secretary*

Ambraw Chapter

The meeting of the Ambraw Chapter of the Illinois Society of Professional Engineers was held at the Benwood Hotel in Effingham on September 27th with D. R. Connor, Sr., presiding.

Dinner was served at 6:30 p. m. to fifteen members and nine guests. The meeting was called to order at 7:30 p. m.

Minutes of the previous meeting were read and approved. Outline of the work of the meeting of the Executive Committee was read including comments by the president.

The following bills were allowed: For stenographic service and other incidental expenses for this meeting, $4.00.

A letter from the State President concerning the "Employment Service" for the Society was read and discussed at great length. Action was postponed until the next meeting.

Mr. Brissenden, program chairman, introduced Captain Robert N. Gamble, U. S. Army Reserve, who gave a very informative talk on Atomic Energy and Radiological Defense.

Meeting adjourned at 9:30 p. m.

R. B. Walters, *Secretary*

Rock River Chapter

The meeting was called to order September 8, 1950, at 8:05 p. m. by President B. C. Taylor. Since there was no business transacted at the last meeting, which was the Annual Dinner, and was attended by the ladies, wives and sweethearts of the members, the reading of minutes was dispensed with.

Messrs. S. E. Johnson, H. L. Benson, and A. H. Ferger all reported for the Membership Committee.

Mr. R. G. Thomas, chairman of the Committee on Ethics, Professional Practices and Registration Laws, reported that he has a roster of all Registered Professional Engineers of Illinois, and that it may be obtained from him or from the secretary.

Mr. Robert Hofmann, a member of the Picnic Committee, read the report of the committee concerning the Annual Stag Picnic held at the Oregon Country Club on Saturday, August 5. As usual, the picnic was a joint affair with the Rockford Chapter. One hundred fifty-nine tickets were sold and almost that many were present to play golf, talk, eat and enjoy themselves in practically any manner that appealed to them. It seems to be impossible for either this chapter or the Rockford Chapter to sponsor such a picnic and not profit by it, financially and otherwise. This year the receipts exceeded the dis-

bursements by $102.43, and this was split between the two sponsoring chapters.

Mr. W. O. Anthony explained the details of the University of Illinois Extension Service course on "Principles of Public Speaking" which he is tentatively arranging, and asked that all who were interested fill out applications which he had available.

President Taylor introduced Dr. George B. Ekblaw, President of the Illinois Society of Professional Engineers. Dr. Ekblaw chose to discuss the Society and explain its organization and the functions of the committees. He explained that some of the committees of the Society were ordinarily not very active, being just "in waiting" for the time when they will be needed. There are a total of twenty-three committees. Eight are administrative. There are three promotional committees.

President Ekblaw explained that the Military Affairs Committee would be known in the future as the Civil Defense Committee. The duties of this committee have not been entirely determined. The chapters are responsible for putting engineers to work on Civil Defense. There are a number of committees charged with various duties pertaining to legislation. The old Legislative Committee is now the Legislative Analyzing Committee. This committee should direct the chapter membership in contacting legislators, or candidates. It is desirable to get acquainted with the members of the Legislature, get them to our meetings and let them know that we are organized.

When the Legislature meets, the Legislative Action Committee will contact the chapter Legislative Analyzing Committee to determine whether the membership of the chapter is for or against proposed legislation.

There are three committees who have to do with legislation:

1. Legislative Action Committee (State level)
2. Legislative Analyzing Committee (Chapter level)
3. Legislative Analyst Committee (State and Chapter).

The last named committee is charged solely with raising funds to finance the hiring of a Legislative Analyst, and to arrange for the hiring of a suitable person for this position.

President Taylor then introduced Mr. H. A. Spafford, a member of Capital Chapter and chairman of the State Society Legislative Analyst Committee. Mr. Spafford is a sanitary engineer with the State Department of Public Health. Mr. Spafford explained the need of a full-time representative in Springfield during the six-month session of the Legislature, which meets every two years. In the past much of this work has been done on a voluntary basis, by members of the Legislative Committee and others. Many things come up during the meeting of the Legislature. Not all of them are vital to us, as engineers. However, many may affect us in some way, and may be of concern to our professional welfare.

Mr. Spafford explained that we must not become a labor union or a monopoly, but must "minister" to public. We must also be realistic. If we are honest w ourselves we must admit that we want something for efforts besides just "satisfaction." We want recognit of our services. He stated that we have about ten cent of the Registered Professional Engineers in the ciety, and asked why this is so. The reason, he thou was that many are convinced that they are not going "get their dues back." We must show them that t will get some real dividends from the Society. We m show that we can get results and the Legislative Anal program is one way to do this. The younger engine need help. We must keep the Society purely pro sional. Inroads among the younger engineers are be made by the unions, particularly by some A. F. of organizations. This current is becoming more evident

A Legislative Analyst can sell Engineering to the p lic and let the legislators know that he is present. can establish the identity of the profession and be service to legislators as a source of information wh can be trusted. The Board of Direction of the Soci has authorized the employment of Mr. J. J. Woltm on a contingent basis. Mr. Woltman is in private pr tice, but has partially retired. He has a reputation honesty and sincerity. He has agreed to accept the p tion for $8,000, salary and expenses, provided it can raised. None can be appropriated from the regu funds of the Society. Mr. Spafford suggested that members of the Society contribute to this fund on basis of those earning less than $5,000 per year to c tribute $5.00, and those earning over $5,000 annually contribute $10.00. Members desiring to contribute m may do so. Donations may be made only by bona f members of the Society. Mr. H. F. Walder is the cha man of the chapter committee on Legislative Analyst.

The meeting was adjourned at 10:05 p. m., and freshments were served.

A. H. FERGER, *Secretary*

Chicago Chapter

After the dinner at the Electric Club, the meeting Oct. 3, 1950 was opened by George L. DeMent as cha man at 7:10 p. m. There were 26 members present.

The minutes of the previous meeting were read a accepted without correction.

Mr. DeMent gave a detailed account of the conventi program of the N. C. S. B. E. E. for the 9th, 10th a 11th of October, again inviting the membership of t Society to attend some of the sessions.

To open the meeting for discussion the chairman ask for opinions on the literature pertaining to the Ta Hartley Act and the "Statement of Principles" mail to the membership recently.

Mr. Lonier rose to give his opinion on the "Stateme of Principles on Collective Bargaining for Professio Employees." He contended that they were a negati approach at best for aiding in the economic welfare

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the engineer and did very little, if anything, to aid the engineer in this respect.

Mr. Spurling defended the work of the Oklahoma Convention in propounding the statement.

Reference was made to the work done by the Committee on Fees and Salaries and Mr. Gunlock cited the value of the schedule in setting salaries for engineers employed by the city. A suggestion was made by Mr. Reiter to appoint a committee to find ways and means to effect the recommendations made in the Schedule of Fees and Salaries.

Mr. DeMent then asked Mr. Edwards to present our guest, Mr. H. F. Spafford of Capital Chapter, chairman of the Legislative Analyst Committee.

Mr. Spafford tied his preliminary remarks to the foregoing discussion saying that a lot more had to be done by the Society in the economic field if the Society was to grow and even exist.

He then explained the need for a legislative analyst, a man who would be employed by the Society to represent it in state legislation whenever bills concerning engineering activities were introduced. He stated that his committee was formed to solicit voluntary contributions from the Society membership to assure the necessary funds for the employment of the Legislative Analyst.

Mr. Woltman, a consulting engineer, has agreed to accept the position of Legislative Analyst, which is contingent upon $8,000.00 to be solicited by the committee.

The Committee is asking a contribution of $5.00 each from engineers earning less than $5,000 and $10.00 each from those earning more than $5,000.

Mr. Spurling rose to oppose the idea, stating that to have representation such as this might break up the Society in quarrels with other engineering societies. There was other opposition to the idea but favorable comments for it were made by Messrs. Gunlock, Kaindl, Dolio, Fensterle and others.

Mr. Keoughan suggested that to follow the expressions on the card announcing this meeting, letters to the officers be written by the members outlining and giving

their ideas for a chapter program for advancing our aims.

Mr. Graf gave a very forceful expression on his reaction to the meeting announcement, having taken it seriously and with much thought. He recommended a vigorous publicity campaign be started about the Society's activities, particularly among the engineering profession.

The report of the treasurer was given and a motion by Mr. Gunlock to accept was seconded. The motion was carried.

The secretary requested a motion be made to pay the 1951 membership dues of the four students given the membership award this June. This motion was made by Mr. Lamb, seconded by Mr. Fensterle. It was adopted.

Mr. Spafford expressed his pleasure for the invitation to this meeting. He was accorded an enthusiastic burst of applause.

The meeting was adjourned at 9:30 p. m.

EDWARD L. REITER, *Secretary*

COST OF LIVING INDEX

The correction factor to be applied to the I. S. P. E. Schedule of Minimum Fees and Salaries was 173.8 for September, 1950. The factor is based upon the U. S. Department of Labor's most recent Consumer Price Index.